REMARKS

I.   Introduction

With the cancellation without prejudice of claim 2, claims 1 and 3 to 15 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II.   Priority

As regards the claim for priority, Applicant maintains that the present application is entitled to a filing date of **_September 12, 2000_** and is continuing to seek to have a filing date of September 12, 2000 according to the present application under 37 C.F.R. § 1.6(e).

II.   Claim 10

The Office Action states that claim 10 "will be" objected to under 37 C.F.R. 1.75 as a substantial duplicate of claim 9 should claim 9 be found allowable. Since no present objection is made, Applicant does not respond. However, it is noted that "a mere difference is scope between claims has been held to be enough" to avoid such an objection.

IV.   Rejection of Claims 1, 2, 4 and 7 to 15 Under 35 U.S.C. § 103(a)

Claims 1, 2, 4 and 7 to15 were rejected under 35 U.S.C. § 103(e) as unpatentable over the combination of U.S. Patent No. 6,326,704 ("Breed et al.") in view of U.S. Patent No. 6,338,010 ("Sparks et al."). Applicant respectfully submits that the combination of Breed et al. and Sparks et al. does not render unpatentable the present claims as amended herein for at least the following reasons.

Claim 1 relates to a device for controlling or regulating an operational sequence in a motor vehicle. Claim 1, as presented, recites that the device includes a printed circuit board, a communications bus integrated on the printed circuit board, and a plurality of arrangements for performing a control or regulation. Claim 1 has been amended herein without prejudice to clarify that each one of the arrangements includes a processor, a storage unit and an input and output unit. Support for the amendments to claim 1 may be found, for example, in Figure 1. Claim 1 further

recites that the plurality of arrangements are integrated on the printed circuit board and interconnected by the communications bus.

Breed et al. purportedly relate to a vehicle electrical system. In this regard, Breed et al. do not disclose, or even suggest, a plurality of arrangements for performing control or regulation, which are integrated on a printed circuit board, each one of the plurality of arrangements including a processor, a storage unit and an input unit, as recited in claim 1. Instead, Breed et al. describe vehicle components and various sensors mounted to a vehicle but not integrated on a printed circuit board. See for example, Figure 20 and related text. Moreover, rather than including a processor for each component and/or sensor, Breed et al. describe a single processor for all vehicle components. In this regard, the single processor uses pattern recognition algorithms to identify and classify patterns in time series data derived from signals emitted by the vehicle components so that a determination may be made as to whether the vehicle components are functioning properly or abnormally. See col. 21, lines 22 to 32; col. 28, lines 8 to 18. Indeed, the processor is never referred to in the plural sense. See id.

It is also respectfully submitted that it that the single processor is not included as part of any of the component sensors, but rather is included as part of the diagnostic module 1700, since it is the only element described to receive signals generated by the various sensors and the only element described to perform pattern recognition. In this regard, Breed et al. state at col. 22, lines 38 to 60 that:

> All of the sensors illustrated in FIG. 20 are connected to a data bus 1600. A diagnostic module 1700, in accordance with the invention, is also attached to the vehicle bus 1600 and receives signals generated by the various sensors.
> As shown in FIG. 20, the diagnostic module 1700 has access to the output data of each of the sensors that have information relative to the component 1000. This data appears as a series of numerical values each corresponding to a measure value at a specific point in time. The cumulative data from a particular sensor is called a time series of individual data points. The diagnostic module 1700 compares the patterns of data received from each sensor individually, or in combination with data from other sensors, with patterns for which the diagnostic module has been trained to determine whether the component is functioning normally or abnormally.
> Central to the diagnostic teachings of this invention is the manner in which the diagnostic module 1700 determines a normal pattern from an abnormal pattern and the manner in which it decides what data to use from the vast amount of data

available. This is accomplished using pattern recognition technologies.

Sparks et al. purportedly relate to a multi-sensor module for communicating sensor information over a vehicle data bus. In this regard, Sparks et al. do not disclose, or even suggest, a plurality of arrangements for performing control or regulation, which are integrated on a printed circuit board, each one of the plurality of arrangements including a processor, a storage unit and an input unit, as recited in claim 1. Instead, Sparks et al. describe a plurality of sensors 22_1 to 22_N and a control circuit 26 mounted on a printed circuit board 14, in which only the control circuit 26 is disclosed as including a microprocessor and memory unit. See col. 4, lines 20 38, and FIG. 4. Indeed, the Final Office Action merely refers to Sparks et al. to assert disclosure of a processor that includes a storage unit.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As indicated above, the combination of Breed et al. and Sparks et al. fails to disclose, or even suggest, all of the limitations of claim 1, including a plurality of arrangements for performing control or regulation, which are integrated on a printed circuit board, each one of the plurality of arrangements including a processor, a storage unit and an input unit. Accordingly, it is respectfully submitted that the combination of Breed et al. and Sparks et al. does not render unpatentable claim 1.

It also respectfully submitted that the Final Office Action's assertion that it would have been obvious to person of ordinary skill in the art to modify the

vehicle data bus system of Breed et al. to include communicating with the control computer as disclosed by Sparks et al. because one of ordinary skill in the art would have been motivated to provide additional means to control and manage operating conditions is improper because (1) such a motivation to provide additional means to control and manage operating conditions is not discussed in Breed et al. or Sparks et al., (2) by disclosing a common diagnostic module 1700 for all sensor signals Breed et al. teach away from providing additional means to control and manage operating conditions, and (3) providing such additional means would change its underlying principle of operation. In this regard, Breed et al. provide, for example, at col. 26, lines 24 to 32 that:

> The diagnostic module 1700 contains preprocessing and neural network algorithms for a number of component failures. The neural network algorithms are generally relatively simple, requiring only a dozen or a few hundred lines of computer code. A single general neural network program can be used for multiple pattern recogniztion [sic] cases by specifying different coefficients for the various terms, one set for each application.

Accordingly, combining these prior art references without evidence of a proper suggestion or motivation to do so "simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight." In re Dembiczak, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

As for claims 2, 4, and 7 to 15, which ultimately depend from claim 1 and therefore include all of the limitations of claim 1, it is respectfully submitted that the combination of Breed et al. and Sparks et al. does not render unpatentable these dependent claims for at least the same reasons given above in support of the patentability of claim 1. In re Fine, supra (any dependent claim that depends from a non-obvious independent claim is non-obvious).

V. Rejection of Claims 3 and 5 Under 35 U.S.C. § 103(a)

Claims 3 and 5 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Breed et al., Sparks et al. and U.S. Patent No. 4,910,658 ("Dudash"). Applicant respectfully submits that the combination of Breed et al., Sparks et al. and Dudash does not render unpatentable the present claims for the following reaons.

Claims 3 and 5 depend from claim 1 and therefore include all of the limitations of claim 1. As more fully set forth above, the combination of Breed et al. and Sparks et al. does not disclose, or even suggest, all of the limitations of claim 1, including a plurality of arrangements for performing control/regulation integrated on a printed circuit board, each one of the plurality of arrangements including a processor, a storage unit and an input unit. Dudash is not relied upon for disclosing or suggesting the limitations of claim 1 not disclosed or suggested by the combination of Breed et al. and Sparks et al. Indeed, it is respectfully submitted that Dudash does not disclose, or even suggest, the limitations of claim 1 not disclosed or suggested by the combination of Breed et al. and Sparks et al. It is therefore respectfully submitted that the combination of Breed et al., Sparks et al. and Dudash does not render unpatentable claims 3 and 5, which depend from claim 1. Withdrawal of this rejection is therefore respectfully requested.

VI.   Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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